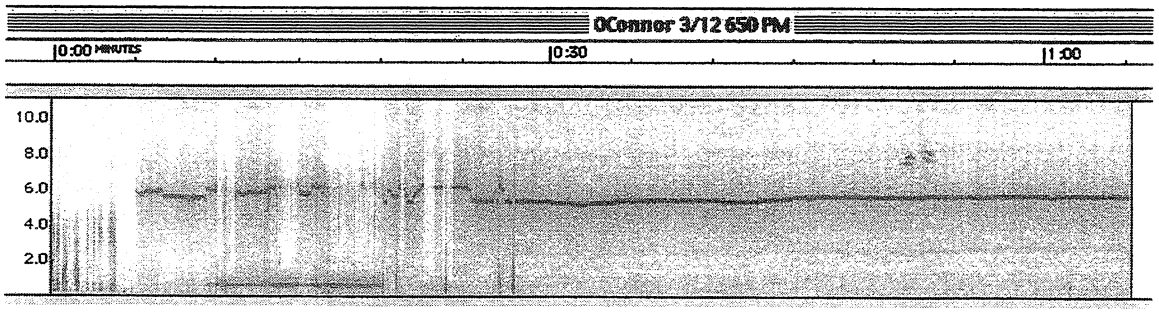
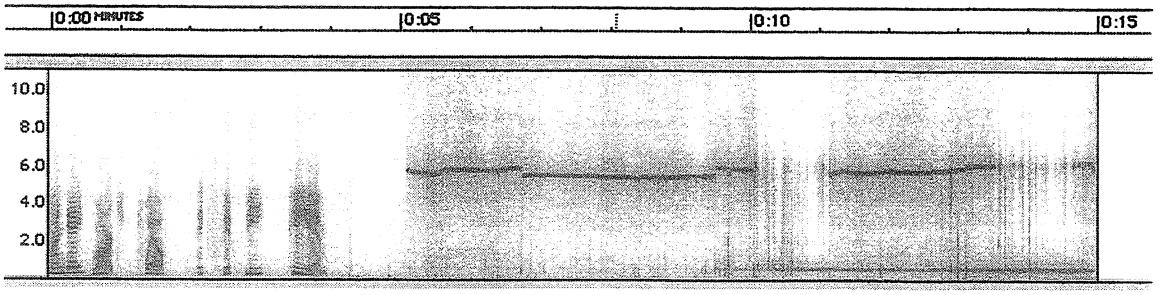
O'Connor High School, Helotes, TX Joins the Ranks of INSPIRE!

On February 12, 2001, High school teachers from the Northside Independent School District, San Antonio, TX, gathered for an INSPIRE Workshop. They learned about natural radio and started construction of VLF2 receivers. On March 2, they were joined by their students who also learned about natural radio and helped in the completion of the receivers.

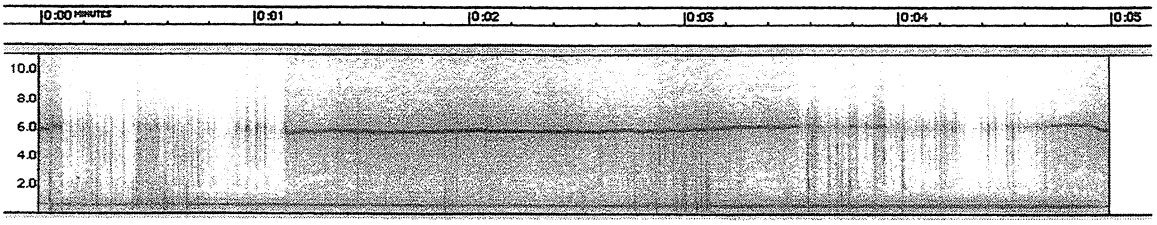
On Monday, March 12, Kathryn Robinson, physics teacher at O'Connor High School in Helotes, TX, and some of her students were observing on a deserted hilltop as the sun set. The students included Ashley Hingson, Erin Peters, Justin Hammond and Nathan Clussman. They were still in the early stages of getting their field setup adjusted, but they got some terrific results. Below is a spectrogram from early in their session.



This spectrogram starts at 6:50 PM with a voiceprint of the announcement starting the session. The horizontal signal at about 6 kHz is an oscillation that is probably due to high level settings on the receiver or recorder.

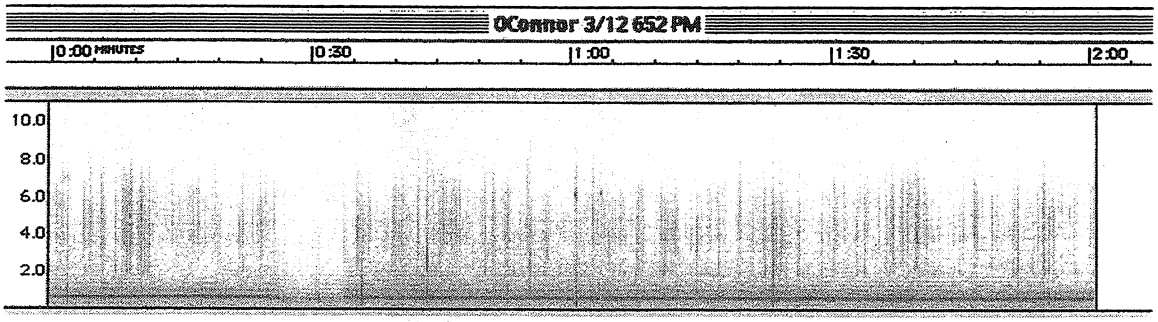


This shows the first 15 seconds.
At about 10 seconds there was a break in the oscillation and sferics are visible (and audible).

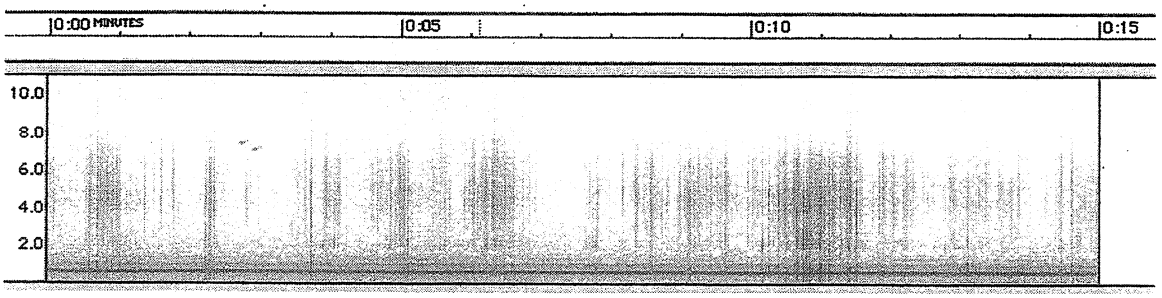


The last 5 seconds from above. Individual sferics can be seen as dense and strong.

At 6:52, the sferics were stronger. Some powerline hum is evident below 1 kHz, but the sferics are easily heard and seen.

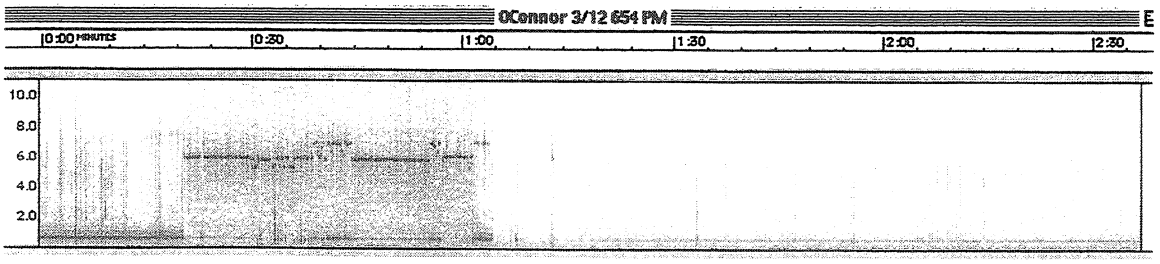


At about 30 seconds, some adjustments were made, but the original values were retained.

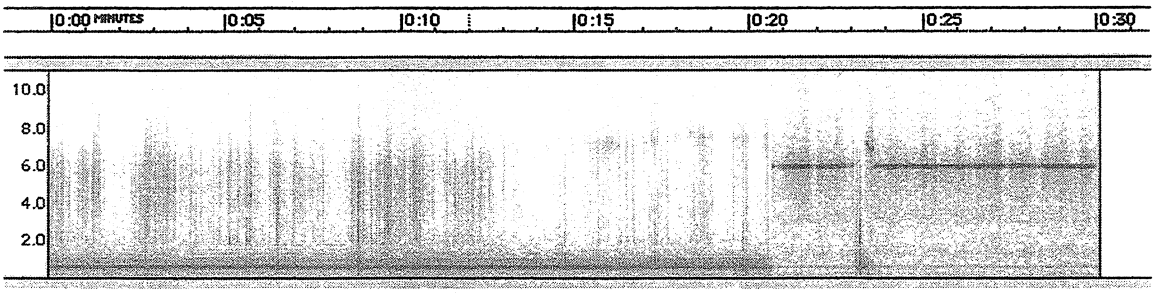


The first 15 seconds shows dense sferics with the powerline hum.

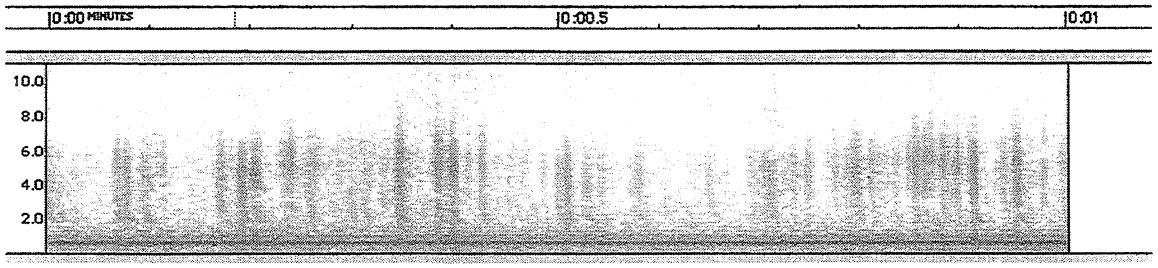
At 6:54, the signal is still strong with tweeks beginning to appear.



In this segment, some adjustments were made at about the 20-second point resulting in an oscillation for about 40 seconds. After that was resolved, the signal returned but at a reduced level. Notice how faint the powerline signal is for this part of the spectrogram.

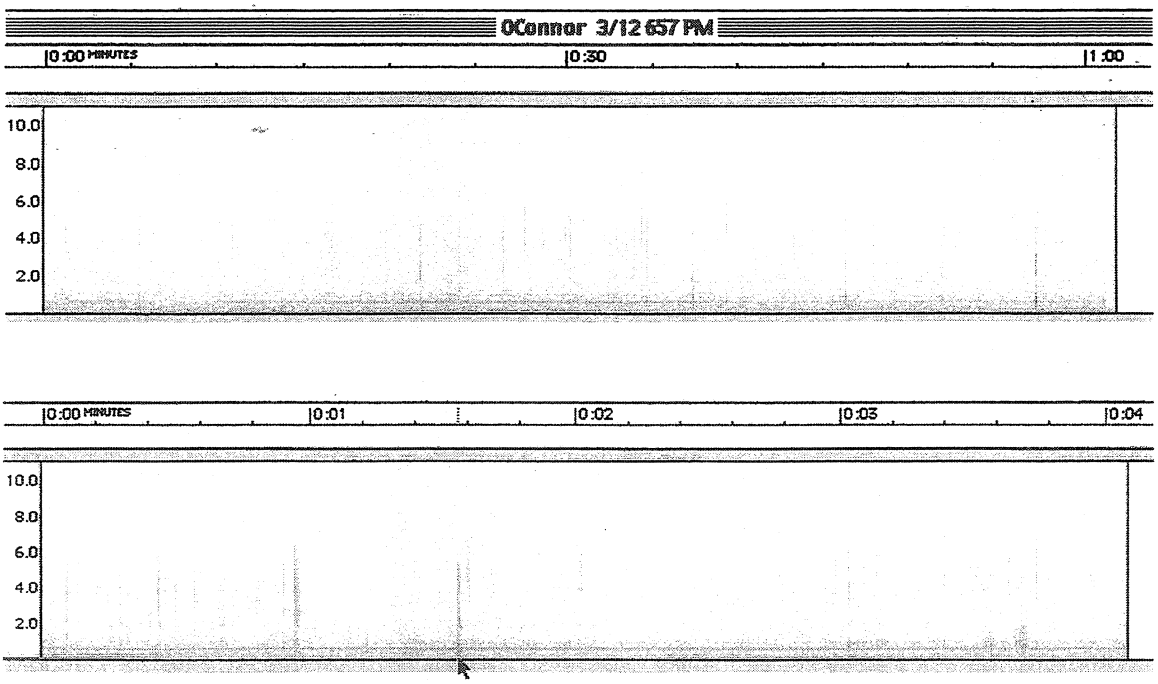


The first 30 seconds starting at 6:54.

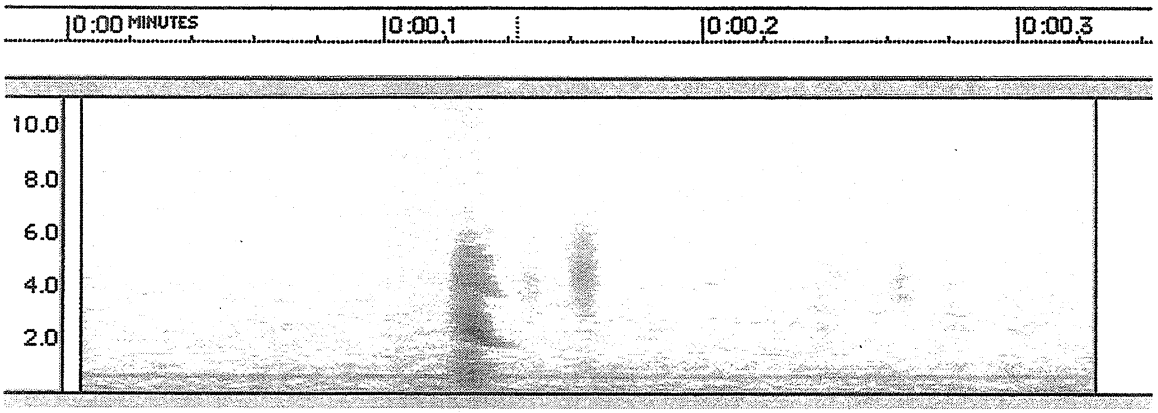


First second. Individual tweeks can be seen with "hooks" at about 2 kHz.

At 6:57, the signal strength is still way down, but sferics and tweeks are dense and strong.

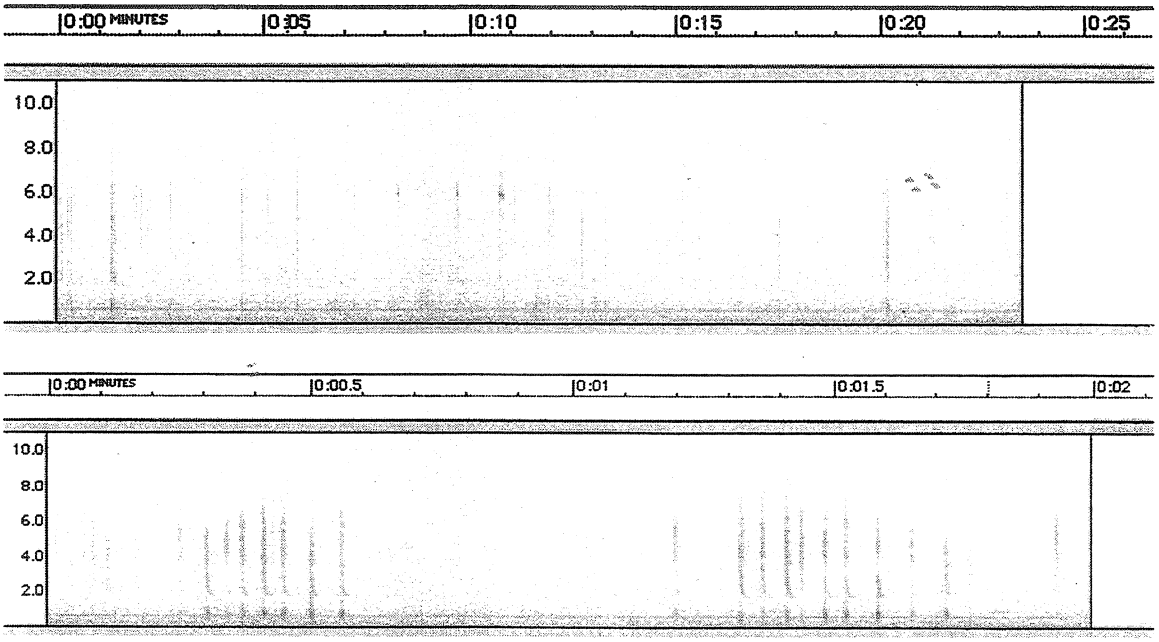


The arrow here points to a strong tweek at the 17-second point.



A close up of the tweek shows the "hook" at 2 kHz and a harmonic at 4 kHz.

This spectrogram is from 7:00 PM. By this time, just 10 minutes after the start of the session and after sunset, the signal has changed from just sferics to mostly tweeks.



The first 2 seconds showing multiple tweeks.

The O'Connor High School INSPIRE Team is to be congratulated for getting from an introduction to natural radio to recording data in less than a month!